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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/933,279	08/20/2001	Lie-zhong Gong	1941. PKG	4642

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Cynthia L. Foulke
National Starch and Chemical Company
10 Finderne Avenue
Brigdewater, NJ 08807

EXAMINER	
GOFF II, JOHN L	

ART UNIT	PAPER NUMBER
1733	

DATE MAILED: 07/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/933,279	GONG ET AL.	
	Examiner	Art Unit	
	John L. Goff	1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 April 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *13,14 and 20-42* is/are pending in the application.

4a) Of the above claim(s) *23,25-28,33 and 3538* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *13,14,20-22,24,29-32,34 and 39-42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

DETAILED ACTION

1. This action is in response to the amendment filed on 4/18/05.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 13, 14, 20, 21, 29-31, and 39-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Souder (U.S. Patent 4,156,626) in view of either one of Adams et al. (U.S. Patent 5,425,218) or Mullaney (U.S. Patent 3,331,293) and optionally further in view of any one of Chin (U.S. Patent 3,426,916), Landrum et al. (U.S. Patent 5,562,795), or Hittenberger et al. (U.S. Patent 3,340,777).

Souder discloses a method of closing a paperboard container having applied and adhesively bonded on at least one surface thereof a reactivatable adhesive. Souder teaches the reactivatable adhesive is a hot melt (e.g. thermoplastic) and comprises an energy-absorbing

ingredient such as an ordinary organic dye or pigment that upon exposure to radiant energy is capable of reactivating the adhesive (Column 4, lines 33-44 and 60-63 and Column 6, lines 28-30 and 67-68 and Column 7, lines 1-2). Souder teaches providing a container having a first substrate surface with the reactivatable adhesive applied thereon (e.g. the adhesive is applied by directly coating the first substrate surface with the adhesive in a plastic state and cooling the adhesive to bond the adhesive to the first substrate surface), exposing the applied adhesive to visible (wavelength of about 400 nm to about 750 nm) and near-infrared (wavelength of about 750 nm to about 2,500 nm) radiant energy to reactivate the applied adhesive, and then pressing the first substrate surface to a second substrate surface to close the container (Figure 2 and Column 4, lines 33-44 and Column 5, lines 49-55). Souder teaches a plurality of the containers are closed through a continuous conveying operation (Figure 2 and Column 5, lines 55-58). Souder does not specifically recite the time required for reactivating the adhesive and pressing the first substrate surface. However, Souder teaches the line speed of the continuous operation is controlled by adjusting the area and intensity of the applied radiant energy such that high efficiency heating is obtained (Column 7, lines 17-33 and Column 9, lines 54-56 and Column 10, lines 1-2), and thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to experimentally determine/optimize these parameters, i.e. line speed, area of applied energy, intensity of applied energy, etc. as a function of the quality of product produced as doing so would have required nothing more than ordinary skill and routine experimentation. Furthermore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to operate the continuous container closing operation taught by Souder under conventional closing times (i.e. the time to reactive the adhesive and press the first

substrate surface to the second substrate surface, the dwell time) of less than one second as it was well known and conventional in the art to efficiently produce continuously closed containers using a reactivatable adhesive with a closing time of one second or less as shown for example by either one of Adams et al. or Mullaney, it being further optionally noted conventional continuous container closing lines operate at speeds of 70 to 300 containers per minute as shown for example by any one of Chin, Landrum et al., or Hittenberger et al.

Adams et al. and Mullaney et al. are exemplary of conventional continuous container closing line operations in the art using reactivatable hot melt (e.g. thermoplastic) adhesives, e.g. reactivated through the application of infrared radiant energy, wherein the time to reactive the adhesives and close the containers is one second or less (Column 1, lines 19-24 and Column 4, lines 22-38 and Column 5, lines 55-58 of Adams et al. and Column 1, lines 14-18, 25-31, and 47-58 and Column 3, lines 59-62 of Mullaney). Chin, Landrum et al., and Hittenberger et al. are exemplary of conventional continuous container closing line operations in the art using reactivatable adhesives wherein the lines operate at speeds of 70 to 300 containers per minute (Figure 1 and Column 2, lines 50-53 and Column 5, lines 57-66 of Chin and Figure 1 and Column 5, lines 40-44 of Landrum et al. and Figure 1 and Column 1, lines 51-54 and Column 3, lines 36-37 of Hittenberger et al.).

5. Claims 22, 24, 32, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Souder, either one of Adams et al. or Mullaney, and optionally any one of Chin, Landrum et al., or Hittenberger et al. as applied to claims 13, 14, 20, 21, 29-31, and 39-42 above, and further in view of Jones et al. (WO 00/20157).

Souder, either one of Adams et al. or Mullaney, and optionally any one of Chin, Landrum et al., or Hittenberger et al. as described above teach all of the limitations in claims 22, 24, 32, and 34 except for a specific teaching of dissolving the dye in the reactivatable adhesive. However, it is noted Souder teaches dyeing the adhesive such that the dye is carried within the adhesive, and thus, it appears Souder discloses dissolving the dye within the adhesive (Column 4, lines 39-44 and Column 6, lines 67-68 and Column 7, lines 1-2). In any event, it would have been obvious to one of ordinary skill in the art at the time the invention was made to dissolve the dye taught by Souder within the reactivatable adhesive for maximum dye utility/efficiency as was conventional in the art as shown for example by Jones et al.

Jones et al. disclose a method for bonding together two substrates (e.g. thin films) using a reactivatable adhesive. Jones et al. teach the reactivatable adhesive is a hot melt (e.g. thermoplastic) and comprises an energy-absorbing ingredient such as an organic dye dissolved in the adhesive that upon exposure to radiant energy is capable of reactivating the adhesive (Page 2, lines 27-33 and Page 3, lines 10-37 and Page 4, lines 1-3 and 12-16 and 25-29 and Page 5, lines 28-34 and Page 11 lines 10-13). Jones et al. teach dissolving the dye within the adhesive provides maximum dye utility/efficiency (Page 11, lines 14-18). Jones et al. teach providing a first substrate surface having the reactivatable adhesive applied thereon (e.g. co-extruded or overmolded such that the adhesive is bonded to the first substrate surface), exposing the applied

adhesive to near-infrared and infrared (wavelength of greater than 780 nm) radiant energy to reactivate the applied adhesive, and then pressing the first substrate to a second substrate (Figure 2 and Page 6, lines 6-13 and Page 8, lines 4-29 and Page 9, lines 8-14 and Page 11, lines 14-18).

6. Claims 20-22, 24, 40, and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones et al. in view of Foglia et al. (U.S. Patent 3,560,291).

Jones et al. is described above in full detail. Jones et al. do not specifically recite the time required for reactivating the adhesive. However, Jones et al. are not limited to any particular time such that it would have been obvious to one of ordinary skill in the art at the time the invention was made to experimentally determine/optimize the reactivating parameters as a function of the quality of product produced as doing so would have required nothing more than ordinary skill and routine experimentation. Furthermore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to perform the method taught by Jones et al. using reactivating times of a fraction of a second as it was well known in the art to efficiently produce bonded thin films in a fraction of a second as shown for example by Foglia et al.

Foglia et al. are exemplary of conventional thin film bonding operations wherein the films are bonded using radiant energy in a fraction of a second (Figure 1 and Column 1, lines 54-58).

Response to Arguments

7. Applicant's arguments with respect to claims 13, 14, 20-22, 24, 29-32, 34, and 39-42 have been considered but are moot in view of the new ground(s) of rejection.

Applicants argue, "While Souder broadly discloses that use of pigmented adhesives are possible, no particular adhesive comprising an energy absorbing additive is exemplified.".

This argument was addressed in the previous Office Action. The claims are not commensurate in scope with this argument as no particular adhesive is claimed. Furthermore, Souder discloses dyed thermoplastics such that the claimed limitations are met, it being noted applicants arguments at page 8, lines 15-16 disclose Souder teaches dyed thermoplastics, i.e. adhesive comprising an energy absorbing additive.

Applicants further argue, "None of the secondary or tertiary documents suggest that the process of Souder could be run at conventional line speeds. The combined disclosures fail to suggest a reasonable likelihood of success using the process of Souder, and fails to suggest applicants invention or provide any reasonable expectation of success. The claimed invention would not even be obvious to try from the combined disclosures of record.".

Souder discloses a continuous container closing line using a reactivatable hot melt (e.g. thermoplastic) adhesive, e.g. reactivated through the application of radiant energy, wherein the line speed, area of applied energy, and intensity of applied energy are controlled. Adams et al. and Mullaney et al. are exemplary of conventional continuous container closing line operations in the art using reactivatable hot melt (e.g. thermoplastic) adhesives, e.g. reactivated through the application of radiant energy, wherein the time to reactive the adhesives and close the containers is one second or less. Chin, Landrum et al., and Hittenberger et al. are exemplary of

conventional continuous container closing line operations in the art using reactivatable adhesives wherein the lines operate at speeds of 70 to 300 containers per minute. Thus, clearly it would have been obvious to one of ordinary skill in the art performing the continuous container closing process of Souder wherein a particular line speed is not required to look to other nearly identical conventional continuous container closing processes such as those suggested by either one of Adams et al. or Mullaney et al. (and/or the optional continuous container closing processes suggested by any one of Chin, Landrum et al., or Hittenberger et al.) to determine a line speed having a more than reasonable expectation of success.

Applicants further argue, "Jones et al. does not teach or suggest a bonding together two substrates using a reactivatable adhesive. Jones does not discloses a reactivatable material that is an adhesive, let alone a hot melt adhesive, that comprises an energy-absorbing ingredient such as an organic dye dissolved in the adhesive that upon exposure to radiant energy is capable of reactivating the adhesive.".

This argument was addressed in the previous Office Action. Jones et al. disclose bonding two substrates by applying radiant energy to a preapplied reactivatable melt thermoplastic comprising a dissolved organic dye. **The reactivatable melt thermoplastic taught by Jones et al. is the same as the reactivatable adhesive claimed and is consistent and in agreement with applicants specification (Page 5, lines 4-10 and Page 7, lines 16-26).** Furthermore, applicants have not established any differences between the reactivatable melt thermoplastic taught by Jones et al. and the reactivatable adhesive of the invention such that both are clearly the same. It is noted that while applicants advance an argument that Jones et al. disclose a process of "welding" two substrates and not "adhesive bonding" two substrates applicants do not

show there is any difference between the material used or the process steps disclosed by Jones et al. and those disclosed and claimed by applicants.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **John L. Goff** whose telephone number is **(571) 272-1216**. The examiner can normally be reached on M-F (7:15 AM - 3:45 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on (571) 272-1156. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

John L. Goff

BLAINE COPENHEAVER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700